

December 16, 1950.

Dr. Werner K. Maas,
411 E. 69 Street,
New York 21, N.Y.

Dear Werner:

Although I am not entirely clear on all the details, there does not occur to me anything obvious that would explain the infertility of your pant- derivatives. I am taking it for granted that all of the stocks in question have been thoroughly checked for their other markers so that there is no question of their K-12 derivation. I also assume that the infertility is apparent whether or not pantothenate is added to the medium.

The two clear possibilities are a) that there is a basic infertility, or b) that the zygotes or their segregants are inviable, particularly on minimal agar. The second possibility could be tested to some extent by conducting crosses on the basis of drug selection on complete medium. a) is by no means improbable, but I can't see what useful approach can be made, except along rather obvious lines you have probably tested already.

We have run across highly infertile (usually not completely sterile) stocks from time to time, without any consistent pattern to them; nothing like your report.

One particular question: how general is this phenomenon, i.e., how many distinct occurrences of pant- have been tested in this way?

Sincerely,

Joshua Lederberg